

Covid-19 and Breastfeeding: Promote, Protect and Support

Namita Batra Guin

ABSTRACT

COVID-19 infection had severely affected normal life globally. The pandemic has created undue stress among the people. Pregnant and lactating mothers being vulnerable are the most affected by the pandemic both physically and emotionally. This article highlights the clinical characteristics of COVID-19, protective action of breastfeeding, skin-to-skin contact, and the recommendations given by various agencies regarding infection control measures to be taken by the mothers during breastfeeding. The article also highlights the role of health professionals in promoting, protecting, and supporting breastfeeding during COVID-19.

Keywords:Breastfeeding, COVID-19.

1 Introduction

Breast milk is the best nutrient for infants, as it contains antibodies that enhance the infant's immune system. WHO recommended that infants should be breastfed exclusively for six months and breastfeeding should be continued with appropriate complementary foods for up to two years of age. [1] Breastfeeding protects newborns from getting sick and also helps protect them throughout their infancy and childhood. Breastfeeding is also effective against infectious diseases as it strengthens the immune system by transferring antibodies from the mother.

Corona viruses are a group of viruses that infects humans and animals. In Humans, the viruses cause respiratory infections like: common cold and sometimes may lead to severe illness like pneumonia. COVID-19 is a respiratory infection caused by novel corona virus. The first case of COVID-19 was found in December 2019 in Wuhan, China and later it had spread to the whole world. The WHO declared it as a pandemic in March 2020.[2] The clinical manifestations of COVID-19 range from uncomplicated illness to septic shock. According to MOHFW, GoI, six types of clinical manifestation categories are identified in patients with COVID-19. The uncomplicated illness where the patient has non-specific symptoms Mild pneumonia where patient experiences cough with no breathing difficulty. Patient with cough with breathing difficulty is put under the category of severe pneumonia and if these symptoms worsen within a week they are categorized under acute respiratory Distress Syndrome (ARDS). Septic and septic shocks are categories that are life-threatening where the patient may have organ dysfunction and persistent hypotension despite volume resuscitation. Patients with severe pneumonia, ARDS, Sepsis, and Septic Shock require hospitalization for the treatment.[3]

2 Transmission

COVID-19 respiratory illness mainly spreads through the droplet mode, i.e. the virus transmits via respiratory droplets produced during coughing and sneezing. These droplets may either land on healthy individual or are inhaled by the people in close proximity of the infected person. However, airborne transmission over long distance is unlikely as suggested by an analysis done in China on 75,465 cases of covid-19, where no evidence of airborne transmission was found.[4] But during the medical procedures that generate aerosols or indoors with poor ventilation without aerosol generating procedures may play a significant mode as airborne transmission of the virus.[5] The respiratory droplets expelled by the infected people can contaminate surfaces, where virus can be viable from hours to days depending on the nature of surface and ambient environment. Other modes of transmission includes feco-oral route/ urinary route, transplacental and breast milk.[6] However the scientific evidence for these routes as significant mode of transmission is very low.

As per the current recommendations on 3rd December 2020, based on the findings breast milk is not likely a source of SARS-CoV-2 transmission.[7]

Studies conducted on the breast milk found negative for presence of virus but the antibodies to fight COVID-19 were found in the breast milk of women with COVID-19. It appears unlikely, that COVID-19 would be transmitted through breastfeeding or by giving breast milk that has been expressed by a mother who is confirmed/suspected to have COVID-19.[8-10] However, infected mother can transmit the COVID-19 virus through respiratory droplets during breastfeeding or intimate contact without preventive measures.[11]

Associate Professor, Rama College of Nursing, Rama University

3 Breastfeeding during COVID-19

As per various studies and recommendations of agencies like WHO, UNICEF, UNFPA, CDC and ABM; newborn should be breastfed exclusively irrespective of their confirmed, probable or suspected state of COVID-19. According to the guidelines, infants born to the suspected/probable or confirmed mothers should be fed according to standard newborn feeding guidelines with application of adequate infection control measures to avoid mother-baby contagion. The mothers without suspected or confirmed COVID-19 and who have no history of close contact with someone having COVID-19, can breastfeed their newborn without taking any special precautions when feeding at breast or expressing milk. However, the general guidelines for breastfeeding and expressing milk should be followed as usual. [7]

The mothers with suspected or confirmed COVID-19 are suggested to take special precautions to prevent infection. The measures include hand washing with soap and water or alcohol based hand rub for 40-60 seconds before touching the baby. The mother should wear medical mask while feeding the baby. High touch surfaces should be cleaned with disinfectants with 70% alcohol or bleach.[2,12-13] If a mother is suspected/confirmed to have COVID-19, coughs overexposed breast or chest, then she should gently wash breast with soap and warm water for at

least 20 seconds, prior to feeding. Rooming-in can be allowed, where the bassinet of the newborn can be kept at two meters distance from the mother's cot. In no case mother who is confirmed or suspected case of COVID-19 and is breastfeeding should 'top-up' with infant formula milk. Counselling and support to the breastfeeding mother should be practiced by the health professionals, to optimize positioning and attachment for adequate milk production. [14]

Mothers under intensive care or with severe COVID-19 infection may be prevented from directly breastfeeding the baby. The mothers may be suggested with the best alternatives like feeding with expressed milk, pasteurized donor human milk or wet nursing. If no option is available then infant formula may be provided, until exclusive breastfeeding is achieved [2]. The standard precautions and safety measures must be taken while feeding the newborn with any of the suggested alternatives. If the mother is expressing the milk, she may require more careful adherence to the recommendations. The mother should be supported in her general health and nutrition to ensure full recovery. She should also be supported to initiate breastfeeding or lactate. [14] Table No. 1 discusses various scenarios for breastfeeding by mothers during COVID-19 pandemic and the recommendations against them.

Table No.1: Infection Prevention and Control (IPC) measures during Breastfeeding

S.no.	Scenarios	Recommendations
1	Direct Breast feeding	<ol style="list-style-type: none"> 1. Wash hands with soap and water or use hand-rub with 70% alcohol. 2. Wear face mask and perform respiratory hygiene. 3. Clean chest before breastfeeding 4. Clean and disinfect high touch surfaces with 70% alcohol. 5. Avoid coughing and sneezing during breastfeeding the child.
2.	Expressed Milk (Manually/breast-pumps)	<ol style="list-style-type: none"> 1. Health professional should provide support to express milk. 2. Wear masks while expressing breast milk manually or by breast-pumps. 3. Wash hands before touching breast pump parts or before expressing milk. 4. Health Professional should provide dedicated breast-pump. 5. Follow recommendations for cleaning all parts of breast-pump before and after each use.
3.	Feeding of Expressed Milk	<ol style="list-style-type: none"> 1. Handle human milk containers with gloves. 2. Disinfecting the milk containers with virucidal agents. 3. Care provider with negative status for COVID-19 should feed the expressed milk. 4. Follow general infection prevention and control measures (IPC measures)
4.	Alternative feeding	<ol style="list-style-type: none"> 1. Pasteurized donor milk. Recommendations same as feeding of expressed milk. (First choice) 2. Wet Nursing as an alternative may be explored. It demands cultural acceptability and availability of wet nurses. 3. Formula Milk- Only when others methods are unavailable. Guide in Preparation of formula milk and take proper IPC measures while feeding the child.

Source: Ng Y P M, Low. Y F, Fok D, Amin Z. Breastfeeding in Covid-19: A Pragmatic Approach. American Journal of Perinatology. 2020; 37:1377–1384.

**4 Promote, Protect and Support:
Role of Health professional**

Early initiation of breastfeeding must be promoted within an hour of birth. Early and uninterrupted skin-to-skin contact between mothers and infants should be facilitated and encouraged by the health professionals. Mothers should be coached regarding expression of breast milk as a means of maintaining lactation in the event of their being separated temporarily from their infants. Practice rooming-in throughout the day and night, especially straight after birth during establishment of breastfeeding, whether or not the mother or baby has suspected, probable, or confirmed COVID-19. However it may not be applicable when mothers with severe COVID-19 symptoms are shifted to intensive care unit. Health professionals should not promote breast milk substitutes, feeding bottles, teats, pacifiers or dummies in any part of their facilities.[12-15]

Health professionals should ensure that standard precautions and guidelines for protecting mother and newborn from COVID-19 are followed in their facilities. Ensure hand-hygiene and face mask when handling the baby and before each breastfeeding. If the new-born is fed expressed milk, ensure that the mother, and caregiver, should wash their hands and cover their face before expressing breast milk. Expressed breast milk

should be fed by a healthy caregiver who does not have COVID-19 and has not been in contact with any COVID-19 case. In case of breast-pumps, all parts of breast-pumps should be disinfected thoroughly. Dedicated breast-pumps may be provided to prevent cross contamination. Health professionals must educate and demonstrate proper pump cleaning before or after each use of breast pump. [16-17]

All mothers should be supported to initiate breastfeeding within the first hour after delivery. Mothers should be supported to practice responsive feeding as part of nurturing care. Proper guidance and counselling of mothers and caregiver can enable them to practice IPC measures during breastfeeding. Health professionals must facilitate environment to enable mothers achieve effective breastfeeding, including position and latching, respond to their infants’ hunger and feeding cues, and express breast milk when required.[18] Mothers with COVID-19 may be counselled using five stage counselling process: (1) establishing a rapport, (2) gathering information or elicit concerns of the mother, (3) defining the problem, needs and information gaps (4) discussing possible solutions or targeted education and (5) closing the contact by summarizing the decision making and possible follow-ups.[19-20] The five stages with the steps are explained in the Table No.-2

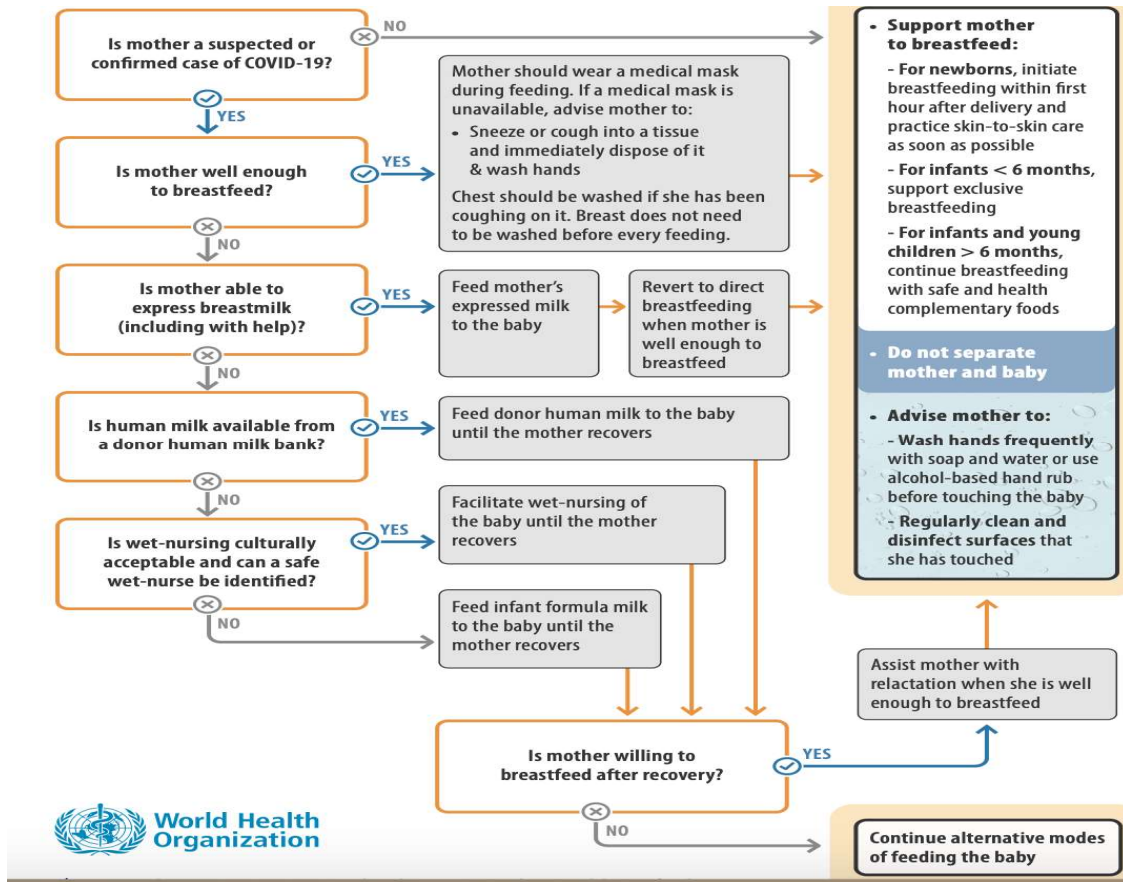
Table No.2: Stages of Counselling for Breastfeeding

S.No.	Stages of Counselling	Role of Health Professional
1.	Establish Rapport	Acknowledging fears and anxiety of mothers regarding COVID-19 and its transmission. Ask concerns about breastfeeding Clarify her situation and state of mind
2.	Gathering Information	Ask open ended questions Ask general questions on mother’s prior experience in breastfeeding and expectations. Proceed to specific COVID-19 questions
3.	Defining problem, needs and information gaps	Define the problem related to breastfeeding which is agreeable to mother. Identify the needs and information gaps of the mother and the caregiver.
4.	Discussing possible solutions and targeted education	Explain about available options or possible solutions with necessary guidance and support.
5.	Closing the contact	Emphasize on current information on breastfeeding during COVID-19. Guide mother to credible sources of information on breastfeeding child during COVID-19. Affirm and adhere to the mother’s decision regarding baby’s feeding.

5 Decision Tree for Health and Community Setting

WHO has provided an algorithm for health professionals for making decisions for mothers with suspected/confirmed COVID-19, to help them in breastfeeding their newborn. This algorithm may help in timely decision making by the health

professionals working in different care settings across the globe. It highlights the scenarios and the decisions by the health professional to initiate breastfeeding or re-lactate as early as possible.



6 Conclusion

The present paper highlighted the importance of breastfeeding during COVID-19 pandemic. As per the current evidences breast milk is safe and is not considered as a mode of transmission. However, the infection may be transmitted from mother to child through droplet mode during breastfeeding. The IPC measures should be taken by the mothers and care providers to prevent infection transmission to the infant during breastfeeding. These measures include: hand washing, wearing mask, disinfecting high touch surfaces and cleaning breast before each feed. The recommendations from various agencies also suggest that mothers should initiate breastfeeding within first hour of life, practice skin-to-skin contact and rooming-in to prevent infections and promote growth and development of baby. However in mothers with severe symptoms of COVID-19, alternatives may be provided. Health professionals should promote, protect and support breastfeeding among mothers in all the healthcare facilities.

Reference

- [1] WHO resources on Breastfeeding and covid-19. https://www.who.int/maternal_child_adolescent/link/s/covid-19-mncah-resources-breastfeeding/en/
- [2] El-Gilany AH. COVID-19 and Breastfeeding. *Asp Biomed Clin Case Rep.* 2020 May 1;3(2):102-105.
- [3] Guidelines on clinical management of severe acute respiratory illness. National Center for Disease Control. GoI. <https://ncdc.gov.in/showfile.php?lid=458>
- [4] World Health Organization. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19) 16-24 February 2020 [Internet]. Geneva: World Health Organization; 2020 Available from: <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>
- [5] Advice on the use of masks in the context of COVID-19. Interim guidance. Geneva: World Health Organization; 2020 (available at [https://www.who.int/publications/i/item/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-\(2019-ncov\)-outbreak](https://www.who.int/publications/i/item/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak)).
- [6] WHO Scientific brief on Transmission of SARS-CoV-2: Implications for infection prevention precautions. 9th July 2020. <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>

- [7] CDC updates as of December 3, 2020. <https://www.cdc.gov/breastfeeding/breastfeeding-special-circumstances/maternal-or-infant-illnesses/covid-19-and-breastfeeding.html>
- [8] Chen H, Guo J, Wang C, Luo F, Yu X, Zhang W, Li J, Zhao D, Xu D, Gong Q, Liao J, Yang H, Hou W, Zhang Y. Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records. *Lancet*. 2020 Mar 7; 395(10226):809-815.
- [9] Wang X, Zhou Z, Zhang J, Zhu F, Tang Y, Shen X. A case of 2019 Novel Coronavirus in a pregnant woman with preterm delivery. *Clin Infect Dis*. 2020 Feb 28.
- [10] Zhu H, Wang L, Fang C, Peng S, Zhang L, Chang G, Xia S, Zhou W. Clinical analysis of 10 neonates born to mothers with 2019-nCoV pneumonia. *TranslPediatr*. 2020 Feb; 9(1):51-60.
- [11] Giuliani C, Volsi PL, Brun E, Chiambretti A, Giandalia A, Tonutti L, Bartolo PD, and Napoli A. Breastfeeding during the Covid-19 pandemic: Suggestions on behalf of woman study group of AMD. *Diabetes Research and Clinical Practice*. 165 (2020). 108239.
- [12] Breastfeeding advice during COVID-19 outbreak. WHO. Regional Office for Eastern Mediterranean. <http://www.emro.who.int/nutrition/nutrition-infocus/breastfeeding-advice-during-covid-19-outbreak.html>
- [13] Caring for newborns when mothers have COVID-19. Pregnancy and breastfeeding. CDC. Updated on 28 December 2020. https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/pregnancy-breastfeeding.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fprepare%2Fpregnancy-breastfeeding.html
- [14] Frequently asked questions. Breastfeeding and COVID-19 for Healthcare workers. WHO. 12 May 2020. https://www.who.int/docs/default-source/maternal-health/faqs-breastfeeding-and-covid-19.pdf?3Fsfvrsn=d839e6c0_1
- [15] Guideline: Protecting, promoting and supporting Breastfeeding in facilities providing maternal and newborn services. WHO. 2017
- [16] How to keep your Breastpump Kit clean: The essentials. CDC. 8th July 2020. <https://www.cdc.gov/healthywater/hygiene/healthycildcare/infantfeeding/breastpump.html>
- [17] ABM statement on Coronavirus 2019. Academy of Breastfeeding Medicine. March, 2020. <https://www.bfmed.org/abm-statement-coronavirus>
- [18] Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services. E-library of Evidence for Nutrition Actions (eLENA). WHO. https://www.who.int/elena/titles/full_recommendations/breastfeeding-support/en/
- [19] Yvonne Peng Mei Ng, Yi Fen Low, Xin Lei Goh, Doris Fok, Zubair Amin. Breastfeeding in COVID-19: A pragmatic approach. *Am J Perinatol* 2020; 37: 1377-1384? DOI <https://doi.org/10.1055/s-0040-1716506>. ISSN 0735-1631
- [20] Claire Westdahl and Sallie Page-Goertz. Promotion of breastfeeding- beyond the benefits. *International Journal of Childbirth Education*. 21(4):8-16.